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June 28, 2007

Barbara Byron
Nuclear Policy Advisor
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Dear Barbara:

Attached is an annotated copy of the draft CEC consultants' report, "Nuclear Power in California: 2007 Status Report." The report provides an impressively comprehensive and current summary of the rapidly evolving status of nuclear energy and implications for California. But it is also clearly a draft report, and needs and will benefit from external review including the comments that I have provided.

The most important issue with the report centers on the discussion of nuclear waste policy and the implications for the California moratorium. As was illustrated at the CEC Workshop, there is almost universal expert scientific consensus that deep geologic isolation can provide safe, permanent disposal of nuclear waste. The only expert debate is over whether the Yucca Mountain site can meet safety standards, compared to alternative geologic media being studied in other countries. This debate over Yucca Mountain is likely to be largely resolved over the next several years as the NRC reviews the Yucca Mountain license application.

Likewise, there is now almost universal expert scientific consensus that continued and growing emissions of carbon dioxide now risk major damage to our long-term environment and human welfare. I think that the report needs to highlight this strong contrast in the scientific consensus about the long-term consequences of deep geologic isolation of nuclear wastes, versus those of continued and growing emissions of carbon dioxide, because this stark contrast calls into question the wisdom of the current California moratorium on new nuclear power plant construction based on the lack of a demonstrated and approved technology for nuclear waste disposal. Thus I think that the report should take much more seriously the potential that the current moratorium could be overturned by the legislature or by referendum.

Also, I have advised that the report should quote the state law on the moratorium, which states:

“Nothing in this section requires that facilities for the application of that technology or means be available at the time that the commission makes its findings.”

Clearly the law intends that the moratorium can be ended before construction and operation of Yucca Mountain commence. Therefore the requirement of the state law

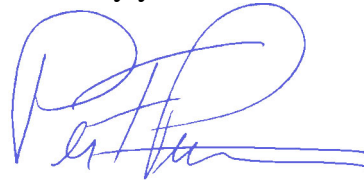
“that there has been developed and that the United States through its authorized agency has approved and there exists a demonstrated technology or means for the disposal of high-level nuclear waste”

refers to the completion of repository characterization, site selection, design, and licensing activities, culminating in the approval of the repository via the issuance of a construction license by the Nuclear Regulatory Commission. On June 21 the U.S. House of Representatives voted 351 to 80 against an amendment that would have cut funding for the continued development of the license application for Yucca Mountain, showing that strong political support remains to complete the technical analysis and licensing activity for the site.

Under the current schedule, a construction license could be issued for Yucca Mountain as soon as 2011. This is three years earlier than the earliest date anticipated for any new nuclear construction in the United States. Thus the report needs to emphasize that the California moratorium could in fact reasonably be ended well before nuclear power plant construction could be started in California, even if Early Site License work was started today. Therefore the report needs to look seriously at potential role that new nuclear plants, entering service before 2020, could have on the cost and carbon dioxide emissions from California electricity generation.

The report is impressive in its breadth and depth, and I appreciate the opportunity to provide comments in the attached PDF copy.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'F. Peterson', with a stylized, flowing script.

Per F. Peterson
Professor
Department of Nuclear Engineering

Enc.: Annotated draft consultants' report, CEC-100-2007-005-D